

Date: Thu, 3 Mar 94 04:30:34 PST
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>
Errors-To: Ham-Digital-Errors@UCSD.Edu
Reply-To: Ham-Digital@UCSD.Edu
Precedence: Bulk
Subject: Ham-Digital Digest V94 #56
To: Ham-Digital

Ham-Digital Digest Thu, 3 Mar 94 Volume 94 : Issue 56

Today's Topics:

2400 baud installation
Anyone have the AX.25 spec?
Comments on TAPR-2 board?
Email address for ARRL?
EMAIL to mid-ocean? (2 msgs)
NET_Mac2.3.37.sea.hqx.text
NET_Mac2.3.38.sea.hqx.text
Soft/Hardware for MFJ-1224 (IBM)
Texas instruments DSP starter Kit

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 2 Mar 94 16:32:33 GMT
From: news-mail-gateway@ucsd.edu
Subject: 2400 baud installation
To: ham-digital@ucsd.edu

Hello to All,

I have a Pac-Comm Micropower-2 1200 baud TNC. I would like to
install a 2400 baud modem into the TNC. When I called Pac-Comm they told
me they do not sell a 2400 baud for the unit.

I purchased an MFJ-2400 modem, of course MFJ does not guaranty the
compatibility of this 2400 buad modem with the Pac-Comm TNC. However,
looking at manuals, it looks like by cutting the Receive data (pins 17&18),
Transmitter clock (pins 11and 12) and the Receive clock (pins 13 and 14)

traces on the MFJ Modem header connector and connecting the MFJ-2400
modem header connector and it will work. Does this sound correct?

Has anyone else out there done this?

Any guidance and insight will be appreciated!

Thanks.
Dan Flynn ww3n
flynn@nadc.nadc.navy.mil

Date: 2 Mar 1994 16:02:03 GMT
From: ihnp4.ucsd.edu!swrinde!elroy.jpl.nasa.gov!ncar!csn!col.hp.com!
news.dtc.hp.com!hpscit.sc.hp.com!icon!hpbs3591.boi.hp.com!brianm@network.ucsd.edu
Subject: Anyone have the AX.25 spec?
To: ham-digital@ucsd.edu

Does anyone have the AX.25 spec they could email me. I have looked
in several places on the Internet, but could not find it.

Thanks & 73sBrian

--

Brian Mahaffy	Hewlett-Packard	Any sufficiently advanced
Storage Subsystems Division (SSD)		technology, is indistinguishable
N6UGP	(208)396-7857	from Magic!
brianm@zeus.boi.hp.com		Arthur C. Clark
N6UGP@WB7DOW.ID.U.S.A.NA		

Ask me about Linux! The Free Unix for x86 PCs

"They, that can give up essential liberty, to obtain a little temporary
safety, deserve neither liberty nor safety." -- Benjamin Franklin 1759

Date: Tue, 1 Mar 1994 18:10:58 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!europa.eng.gtefsd.com!
news.umbc.edu!eff!news.kei.com!world!dts@network.ucsd.edu
Subject: Comments on TAPR-2 board?
To: ham-digital@ucsd.edu

In article <1994Feb28.202528.6888@newsgate.sps.mot.com> rapw20@email.sps.mot.com
writes:

>Has anyone out there built a TNC from the TAPR-2 circuit board? If so, I'd be
>interested in hearing about it. Specifically, how difficult was it to locate
>parts, was it any cheaper than buying a used 1270 or other clone, any problems
>getting it to work?

>

>I'm looking for a (relatively) cheap entry into the 9600bps packet world and
>building a TAPR TNC and adding the 9600 modem seems like one way to do it.

>

>Any comments will be appreciated.

>

>Thanks & 73... Mark AA7TA

I have built one and have a second partially complete. You would certainly
do better buying a TNC instead. DSRI has some with 9600 built in, and so
forth. The biggest advantage I see with the TAPR modem is the ability to
do bit regen, but that is only an issue for your full duplex packet
repeater, not for user equipment.

Dan

--

Daniel Senie Internet: dts@world.std.com
Daniel Senie Consulting n1jeb@world.std.com
508-365-5352 CompuServe: 74176,1347

Date: 2 Mar 1994 16:00:10 GMT
From: ihnp4.ucsd.edu!swrinde!elroy.jpl.nasa.gov!ncar!csn!col.hp.com!
news.dtc.hp.com!hpscit.sc.hp.com!icon!hpbs3591.boi.hp.com!brianm@network.ucsd.edu
Subject: Email address for ARRL?
To: ham-digital@ucsd.edu

Hi folks. Does anyone know the email address for the ARRL. I know they
are on the net, but have not been able to get an address for them.

Fingering @arrl.org was no help.

I hope this isn't an FAQ, but I couldn't locate any FAQ list here or
on UCSD.EDU.

Thanks & 73sBrian

--

Brian Mahaffy Hewlett-Packard | Any sufficiently advanced

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N6UGP	(208)396-7857	from Magic!
brianm@zeus.boi.hp.com		Arthur C. Clark
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Ask me about Linux!	The Free Unix for x86 PCs
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"They, that can give up essential liberty, to obtain a little temporary safety, deserve neither liberty nor safety." -- Benjamin Franklin 1759

Date: 24 Feb 94 20:46:08 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!news.mic.ucla.edu!ctc.com!pitt.edu!gatech!
howland.reston.ans.net!pipex!demon!nick01.demon.co.uk!nick@network.ucsd.edu
Subject: EMAIL to mid-ocean?
To: ham-digital@ucsd.edu

Hi,

I'm not a radio amateur (yet), but I will be doing my HF test later this year.
If this question is silly/daft, please excuse it as due to my ignorance ;-)

Members of my family live on a yacht, currently heading towards Hawaii.
They have an HF rig that can *just* reach the UK now (from Central America),
but we expect to lose contact soon (they currently can communicate with some
hams in the North of England). I am a computer networking consultant, and
have access to a number of networks, including the Internet from home and
work. As I will soon be an amateur myself, I will be able (hopefully) to use
AMPR too. AMPR comes into the frame as with their limited power (running on
the yacht's batteries when at sea), it occurred to me that it might be more
feasible for them to send EMAIL to a "local" node, and for the "network" to
shift it to the UK, rather than using brute force (which we don't have).

Now, the question: Is there a simple way for the folks on the boat (who have
a laptop and an ICOM HF transceiver) to exchange EMAIL with a UK based HF or VHF
user (e.g. myself)? Cost (as one might expect) is an issue, so I'd appreciate
sensible ideas (cost should be in the \$100s, NOT \$1000s!).

It seems to me that this sort of thing should be realisable. Is this
unrealistic? Please let me know what you think.

Thanks in anticipation.

Nick nick@nick01.demon.co.uk

Date: Wed, 2 Mar 1994 12:51:22 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
falcor@network.ucsd.edu
Subject: EMAIL to mid-ocean?
To: ham-digital@ucsd.edu

Just to clarify.

CB radio CAN be used for commercial use.
I.E. Trucking companies used them for years to relay information about
position, etc.
Also, in the US you can only talk up to 150 miles away. Yes, 27mhz is an
HF band, but CBer's in the US can't shoot skip. Not that it's enforced, or
even enforcible.
SSB CB radios aren't really cheap, if you want a decent one.
Of course, there isn't much of a difference in price any more.

BTW... does anyone out there know if Stoner is still in business?
My father has a Stoner pro-40 SSB radio that needs a little work.
(This is the only radio I've seen that had 1:1 swr(starduster 5/8 wave ant.))

-Howard J. Poe
falcor@netcom.com

Date: 2 Mar 94 13:03:32 GMT
From: news-mail-gateway@ucsd.edu
Subject: NET_Mac2.3.37.sea.hqx.text
To: ham-digital@ucsd.edu

The Netherlands, March 2, 1994.

Hello dear reader,

Today I distributed the file NET_Mac2.3.37.sea.hqx...

In this version of NET/Mac I implemented the following:

- Added Text Capture FKEY (see: HELP window, option *Text Capture FKEY*)
- Added some more improvements for the 'sourcewhendone' command
- Improved the generation of From addresses for hop-to-hop delivery

The 'Text Capture FKEY' cannot be used yet in a split-window environment, like
TELNET-sessions... In NET/Mac 2.3.38 I will try to change that so that you can
COPY/PASTE any data that appears on the screen.

This version obsoletes all versions of info-mac/comm/net/radio-netmac in the Sumex-Aim archives.

The new NET/Mac has been uploaded to:

- 1) ucsd.edu, to the directory hamradio/packet/tcpip/incoming.
If it's not there then look at hamradio/packet/tcpip/mac.
- 2) world.std.com, to the directory pub/hamradio/mac/packet.

Kind regards,

Adam PA2AGA (e-mail: adam@gg.tno.nl)
(or: pa2aga@gg.tno.nl for letters only, NO BIG files here)

Date: 3 Mar 94 11:17:36 GMT
From: news-mail-gateway@ucsd.edu
Subject: NET_Mac2.3.38.sea.hqx.text
To: ham-digital@ucsd.edu

The Netherlands, March 3, 1994.

Hello dear reader,

Today I distributed the file NET_Mac2.3.38.sea.hqx...

In this version of NET/Mac I implemented the following:

- Added Text Capture FKEY-support for split-window sessions
- Removed a mod that generated faulty From-addresses

This version obsoletes all versions of info-mac/comm/net/radio-netmac in the Sumex-Aim archives.

The new NET/Mac has (hopefully) been uploaded to:

- 1) ucsd.edu, to the directory hamradio/packet/tcpip/incoming.
If it's not there then look at hamradio/packet/tcpip/mac.
- 2) ftp.std.com, to the directory pub/hamradio/mac/packet.

Kind regards,

Adam PA2AGA (e-mail: adam@gg.tno.nl)
(or: pa2aga@gg.tno.nl for letters only, NO BIG files here)

Date: 2 Mar 1994 06:08:08 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!gatech!udel!news.sprintlink.net!

connected.com!krel.iea.com!comtch!pfeuffer@network.ucsd.edu
Subject: Soft/Hardware for MFJ-1224 (IBM)
To: ham-digital@ucsd.edu

BeoPunk CyberWulf (sltmw@cc.usu.edu) wrote:

: Would anyone have a copy of the MFJ comm software for the MFJ-1224 that they
: would like to sell? I have the version for the C-64, but I want to use the IBM
: version instead.

: Or, is there a simple circuit to interface it to SuperMorse? (I hooked the
: two together, but SuperMorse was too sensitive, and I don't want to re-invent
: the wheel if I don't have to)

: Thanks, and 73 de Dan, N7NKR

: --

: -----
: Daniel D Holmes " " - Marcel Marceau
: Internet: SLTMW@CC.USU.EDU
: AmprNet: N7NKR @ N7NKR.HOME.AMPR.ORG 44.40.1.43 [located in Salt Lake City]
: N7NKR @ N7NKR.AMPR.ORG 44.40.12.10 [located in Logan]

Date: 3 Mar 94 08:21:19 GMT
From: news-mail-gateway@ucsd.edu
Subject: Texas instruments DSP starter Kit
To: ham-digital@ucsd.edu

>I have one of the TI DSP Startter kits.
I have one to.

> It uses the TMS320C26BFN DSP chip. There is a little
>software that comes with the unit and more that is available from their bulletin
board.

>
furthermore there are some ham applications specific for the DSK, Johan
Forrer KC7WW made some HF modems, including RTTY, AMTOR, PacTOR, and
HF packet. He also ported the W9GR FIR CW filter and LMS autonotcher
described in QST and QEX to the DSK. The W9GR port is converted 32010
code, and could be programmed much more efficiant on the 32026, but it
works great.

I myself am busy to convert the dsk_loader software to the Apple
Macintosh. With this software you can bootload and download software to
the DSK, execute software, fill and dump memory, graph DSK graphics
output (e.g. FFT) and it can act as a simple console for the DSK.

>You get the board, an assembler, simulator and debugger. The board includes a 12-

bit A/D and

>12-bit D/A on board as well as a serial port to connect it to your PC. The unit requires a

>9VAC power source or you can solder wires to the board and use a +/- 8-12VDC power source. This>

>will void your warranty of course.

>

I heard some people are busy with a bootprom, output to leds, and extra memory.

>I haven't had time to run many of the experiments yet. There is a lot of info and examples

>in the TI Application books (3 volume set) but I don't feel like typing them in and I have

>been unable to load some of the examples from the bulletin board.

>

There is a mirror of the BBS on internet, ti.com.

>Note that the software must be written in assembly as the C compiler won't work with the

>Starter Kit.

That's not exactly right, The DSK come's with a simple assembler, but if you have the

TI C compiler you can download the coff code it produces to the DSK using the supplied

debugger. But a C compiler produces mostly more code than an assembler, so the 1.5 k

of the DSK can be the bottleneck.

>

>This is probably as inexpensive a start into the world of DSO as one can get. It is probably

>a good value despite its limitations.

>

It's a very nice and cheap piece of equipment to start with DSP's.

Gerrit, PA3BYA.

Date: Tue, 1 Mar 1994 15:36:12 GMT

From: ihnp4.ucsd.edu!swrinde!gatech!news-feed-2.peachnet.edu!emory!kd4nc!ke4zv!
gary@network.ucsd.edu

To: ham-digital@ucsd.edu

References <1994Feb26.180036.8166@mnemosyne.cs.du.edu>,
<jfhCLuKBA.30D@netcom.com>,

<rcrw90-280294102512@waters.corp.mot.com.corp.mot.com>€

Reply-To : gary@ke4zv.atl.ga.us (Gary Coffman)

Subject : Re: Using packet radio to access an internet account...

In article <rcrw90-280294102512@waters.corp.mot.com.corp.mot.com>
rcrw90@email.mot.com (Mike Waters) writes:
>In article <jfhCLuKBA.30D@netcom.com>, jfh@netcom.com (Jack Hamilton)
>wrote:
>>
>> There's a lot of stuff on the Internet that can't legally be sent over
>> packet. How do you plan to filter that out before you have a chance to
>> look at it?
>
>Actually the wording in the various rules is almost identical. The
>difference is in the enforcement.
>
>Internet is not to be used for commercial (business) purposes and "obscene"
>messages are illegal everywhere, even on a private telephone call.
>
>The more I look at this, the more convinced I am that this is nothing more
>than a red herring.

The ARPA Internet (big 'I') is not to be used for commercial purposes. It's supposed to be used for "research" purposes only, though informational commercial material may be exchanged between manufacturers and interested researchers if the materials are related to research functions. However, the internet (small 'i') has no such restrictions. Large parts (most?) of it is via alternate carriers than the ARPA Internet. It can be considered the same as any other common carrier network for the purposes of regulation. (Note: since much of the internet (small 'i') is carried gratis by voluntary arrangements, sysop policies may discourage commercial messages, but this is different from the regulatory constraints faced by amateurs where actual criminal prosecutions can take place.) Usenet is an entirely different animal that travels over many different networks and dial up connections. It's a purely voluntary association of sysops and isn't beholden to either Internet or internet, nor bound by their rules of content.

Obscenity is in the eye of the beholder as the Supreme Court has repeatedly ruled. Thus the "community standards" tests required for something to be declared obscene. Simple profanity is no longer illegal in any state. Vulgarity is haphazardly regulated in different jurisdictions, but always *only in public*. Private communications containing profanity, vulgarity, and even obscenity are protected speech as long as both parties to the conversation consent. "Obscene" phone calls are really a misnomer. What's covered under these statutes is more appropriately called *harassing* phone calls where one party is an unwilling participant.

The FCC has ruled that broadcast radio transmissions, including amateur, but *not* common carrier, are always considered *public* utterances with possible "unwilling" listeners. Thus the prohibitions against utterances that are offensive to the listener community are justified. The FCC has

issued guidance in the form of the "7 deadly words" that must never be uttered over the airwaves, and following Supreme Court guidance, the FCC has also prohibited speech referring to excretory or sexual practices. There are no corresponding limitations on point to point common carrier content.

So these aren't Red Herring distinctions at all. Common carrier and voluntary private conversations and correspondence fall under the area of protected speech. Public utterances and writings fall under varying sets of restrictions depending on where, when, and how they are made. The FCC's "broadcast" interpretation is the strictest of these limits.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: Tue, 1 Mar 1994 15:44:10 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!gatech!
wa4mei.ping.com!ke4zv!gary@network.ucsd.edu
To: ham-digital@ucsd.edu

References <MARK.827.2D7166B6@ardsley.business.uwo.ca>,
<CLyLG3.FxF@world.std.com>, <2kvi0e\$i9d@hermes.acs.ryerson.ca>
Reply-To : gary@ke4zv.atl.ga.us (Gary Coffman)
Subject : Re: megabit per second packet (was "Re: Packet at 1.2 GHz (23cm)?")

In article <2kvi0e\$i9d@hermes.acs.ryerson.ca> jeff@ee.ryerson.ca (Donald Jeff Dionne) writes:

>

>The canadian rules are really very flexible on spread spectrum. I know in the
>US you have to use AX.25, and are only allowed I think its 3 spreading keys,
>and that puts a real kink in any plans to use the wavelan stuff under the
>HAM rules at higher powers. We have no such limitations here in canada, as
>long as we stay in the band by 26dB (correct me if the number is wrong.), and
>ID every 30 minutes.

The US rules do not limit data format. AX25 is *not* required. A common use for SS is digitized voice for example, a continuous data stream. We can transmit any digital data we wish, subject to content limits, but we are limited to only certain spreading sequences, or hopping patterns, and we must ID in a narrow band detectable mode every 10 minutes just as with any other amateur transmission. This pretty much kills the Wavelan cards

for amateur use, however, since they aren't designed to switch to a narrow mode on command.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: Wed, 2 Mar 1994 07:47:57 GMT

From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!gatech!

wa4mei.ping.com!ke4zv!gary@network.ucsd.edu

To: ham-digital@ucsd.edu

References <2kvi0e\$i9d@hermes.acs.ryerson.ca>,

<1994Mar1.154410.21850@ke4zv.atl.ga.us>, <2l0qv9\$dhi@hermes.acs.ryerson.ca>

Reply-To : gary@ke4zv.atl.ga.us (Gary Coffman)

Subject : Re: megabit per second packet (was "Re: Packet at 1.2 GHz (23cm)?")

In article <2l0qv9\$dhi@hermes.acs.ryerson.ca> jeff@ee.ryerson.ca (Donald Jeff Dionne) writes:

>Gary Coffman (gary@ke4zv.atl.ga.us) wrote:

>: In article <2kvi0e\$i9d@hermes.acs.ryerson.ca> jeff@ee.ryerson.ca (Donald Jeff Dionne) writes:

>: >

>: >The canadian rules are really very flexible on spread spectrum. I know in the
>: >US you have to use AX.25, and are only allowed I think its 3 spreading keys,
>: >and that puts a real kink in any plans to use the wavelan stuff under the
>: >HAM rules at higher powers. We have no such limitations here in canada, as
>: >long as we stay in the band by 26dB (correct me if the number is wrong.), and
>: >ID every 30 minutes.

>

>: The US rules do not limit data format. AX25 is *not* required.

>

>GREAT! I was mis informed! Acctually, that helps me with a project

>I've been working on that I thought would only fly in Canada.

Unfortunately, cross boarder operations are forbidden to us. 97.311(a) limits us to communications between points that are regulated by the FCC. Last time I looked Canada was still an independent nation. :-)

>: A common

>: use for SS is digitized voice for example, a continuous data stream. We

>: can transmit any digital data we wish, subject to content limits, but we

>: are limited to only certain spreading sequences, or hopping patterns, and

>: we must ID in a narrow band detectable mode every 10 minutes just as with
>: any other amateur transmission. This pretty much kills the Wavelan cards
>: for amateur use, however, since they aren't designed to switch to a narrow
>: mode on command.

>

>Just so I don't have to go hunt it down, what ARE the (3?) spreading codes
>allowed in the U.S.?

97.311(2)(d) The only spreading sequences that are authorized are from
the output of one binary feedback shift register (which may be implemented
in hardware or software).

(1) Only the following sets of connections may be used:

Number of stages in the shift register	Taps used in feedback
---	--------------------------

7	7,1
13	13,4,3,1
19	19,5,2,1

(2) The shift register must not be reset other than by its
feedback during an individual transmission. The shift register
output sequence must be used without alteration.

(3) The output of the last stage of the binary linear feedback shift
register must be used as follows:

(i) For frequency hopping transmissions using x frequencies, n
consecutive bits from the shift register must be used to select the next
frequency from a list of frequencies sorted in ascending order. Each
consecutive frequency must be selected by a consecutive block of n bits.
(Where n is the smallest integer greater than $\log_2(x)$.)

(ii) For direct sequence transmissions using m -ary modulation,
consecutive blocks of $\log_2(m)$ bits from the shift register must be used
to select the transmitted signal during each interval.

Well, whomp there it is! Clear as mud isn't it? As you can see, though
there are only 3 allowed sequences, there are many possible frequency
tables for hoppers, and each station can be in a different part of the
sequence during a transmission. So more than three stations can share
the band at the same time. For direct sequence transmissions using the
same m -ary modulation, only transmission timing differences, and center
frequency, exist to separate stations. But that's sufficient to allow
many stations too.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

End of Ham-Digital Digest V94 #56
